

TURLA0.5G40G-4050

TURLA0.5G40G-4050 is a low noise amplifier with a typical small signal gain of 43 dB and a nominal noise figure of 5 dB across the frequency range of 0.5 to 40 GHz. The DC power requirement for the amplifier is +12 V DC/350 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

## Features:

- Frequency range: 0.5-40GHz
- Gain: 43dB Typ
- Noise Figure: 5dB Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

## Applications:

- Communication systems

## 电气特性 Electrical Characteristics:

| 参数 Parameter            | Min | Typ  | Max | 单位 Units |
|-------------------------|-----|------|-----|----------|
| 频率范围 Frequency range    | 0.5 |      | 40  | GHz      |
| 小信号增益 Small Signal Gain |     | 43   |     | dB       |
| 增益平坦度 Gain Flatness     |     | ±2.5 |     | dB       |
| 噪声系数 Noise Figure       |     | 5    |     | dB       |
| 线性输出功率 Output P1dB      |     | 18   |     | dBm      |
| 饱和输出功率 Output Psat      |     | 21   |     | dBm      |
| 杂散 Spurious             |     | -60  |     | dBc      |
| 输入驻波 Input VSWR         |     | 2    | 2.5 | :1       |
| 输出驻波 Output VSWR        |     | 2    | 2.5 | :1       |
| 直流电压 DC Voltage         | +8  | +12  |     | V DC     |
| 直流电流 DC Supply Current  |     | 350  |     | mA       |
| 阻抗 Impedance            |     | 50   |     | Ohms     |

## 机械特性 Mechanical Specifications:

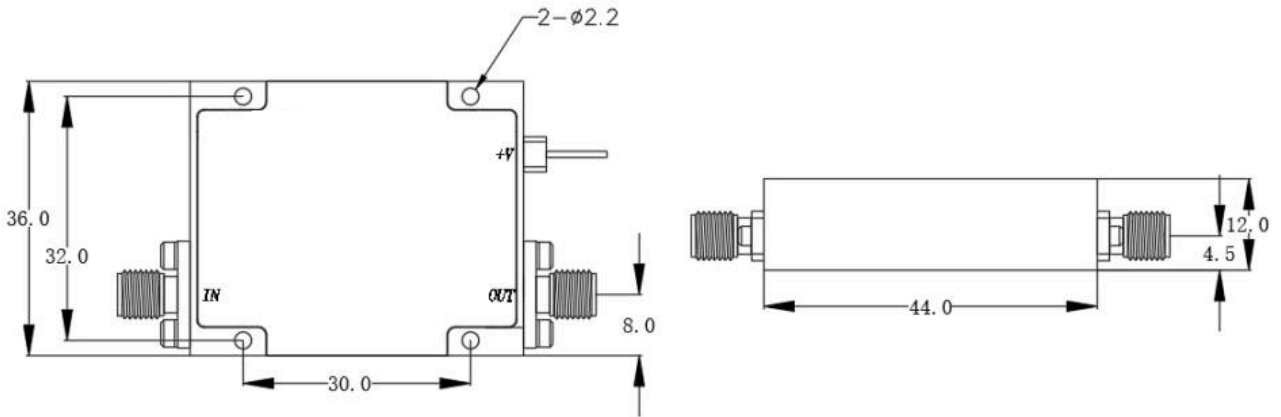
| 参数 Parameter                    | 指标 Value  | 单位 Units |
|---------------------------------|---|----------|
| 输入/输出接口 Input /Output Connector | 2.92mm Female/2.92mm Female                           |          |
| 直流偏置 DC Bias                    | Solder Pin  |          |
| 尺寸 Size                         | 44*36*12(Without heatsink)<br>44*50*32(With heatsink) | mm       |

## 绝对最大值 Absolute Maximum Ratings:

| 参数 Parameter                 | 指标 Value             |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage   | +15 V                |
| 输入功率 RF Input Power          | -15 dBm              |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

## 外形图 Outline Drawing:

Unit:mm



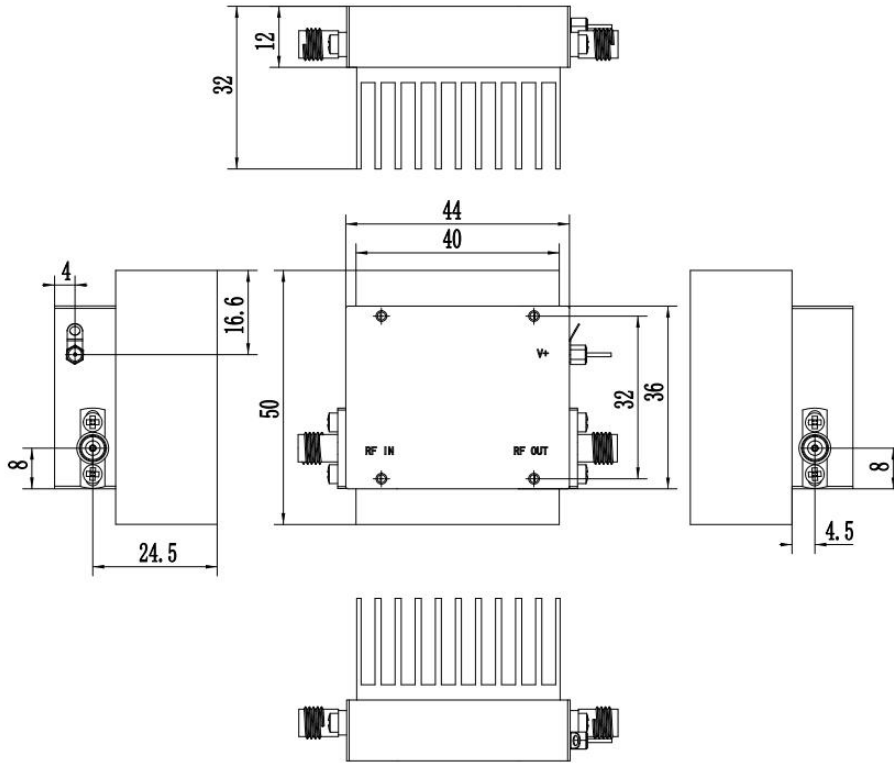
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ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

## 外形图 Outline Drawing:

Unit:mm



## 温度环境 Environmental Conditions:

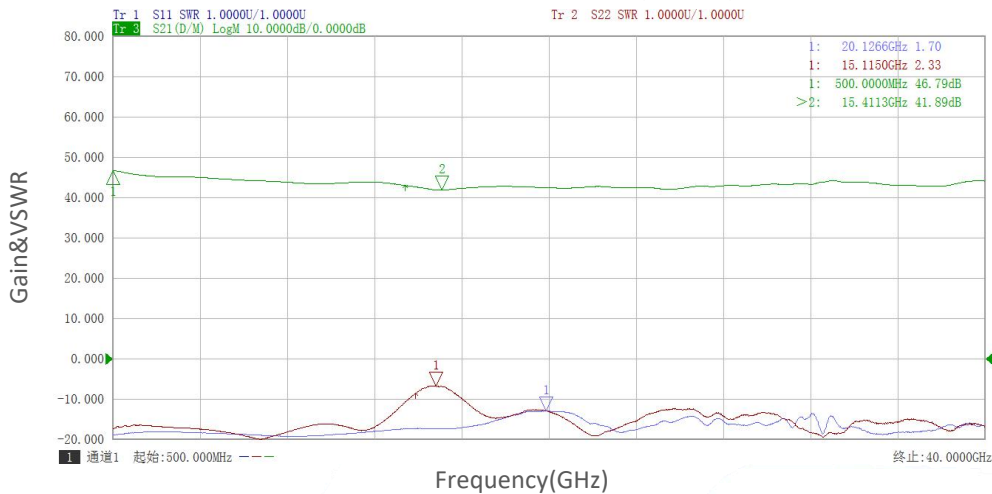
| 参数 Parameter                       | Min   | Typ | Max  | 单位 Units |
|------------------------------------|---|-----|------|----------|
| 操作温度 Operating Temperature         | -45   |     | +85  | °C       |
| 存储温度 Non-operating Temperature     | -55   |     | +125 | °C       |
| 相对湿度 Relative humidity             |   | 95  |      | %        |
| 海拔 Altitude                        | 10,000  |     |      | feet     |
| 震动 Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis |     |      |          |
| 冲击 Shock(non operating)            | 20G for 11msc half sin wave,3 axis both directions  |     |      |          |

## 订货信息 Ordering Information:

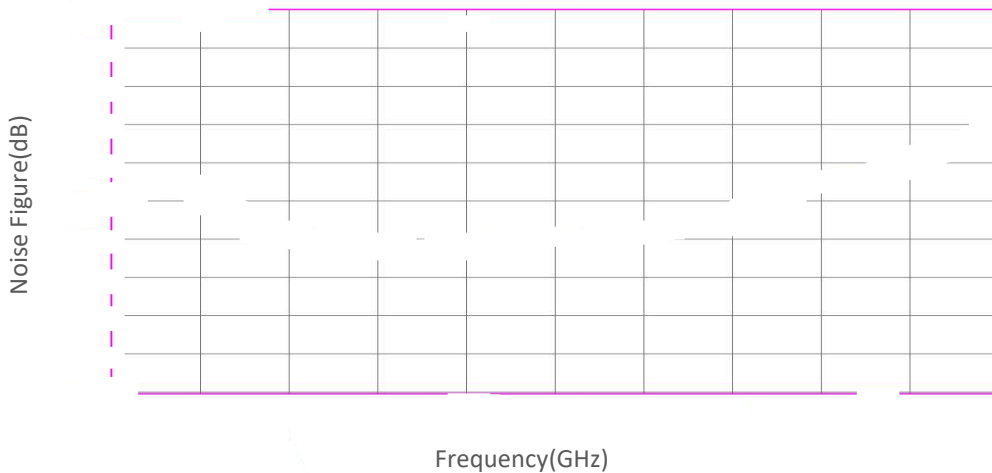
| 标准型号 Base Number     | 描述 Description   | 版本号 Revision |
|----------------------|--|--------------|
| TURLA0.5G40G-4050    | Low Noise Amplifier, 0.5-40GHz, Noise Figure:5dB, Gain: 43dB,P1dB:18dBm,+12V DC,Without Heatsink | Rev.1.1      |
| TURLA0.5G40G-4050 HS | Low Noise Amplifier, 0.5-40GHz, Noise Figure:5dB, Gain: 43dB,P1dB:18dBm,+12V DC,With Heatsink    | Rev.1.1      |

## 典型曲线 Typical Performance Data:

### Gain&VSWR vs Frequency

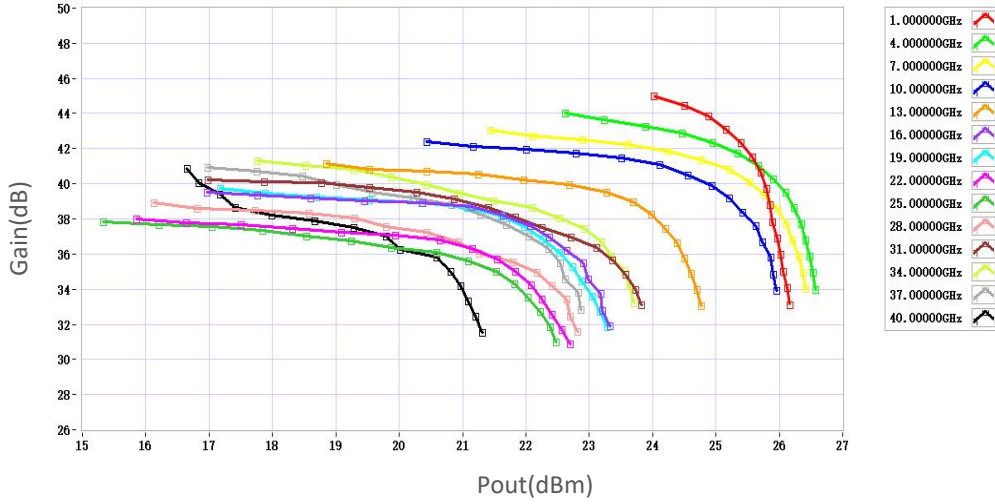


### Noise Figure vs Frequency

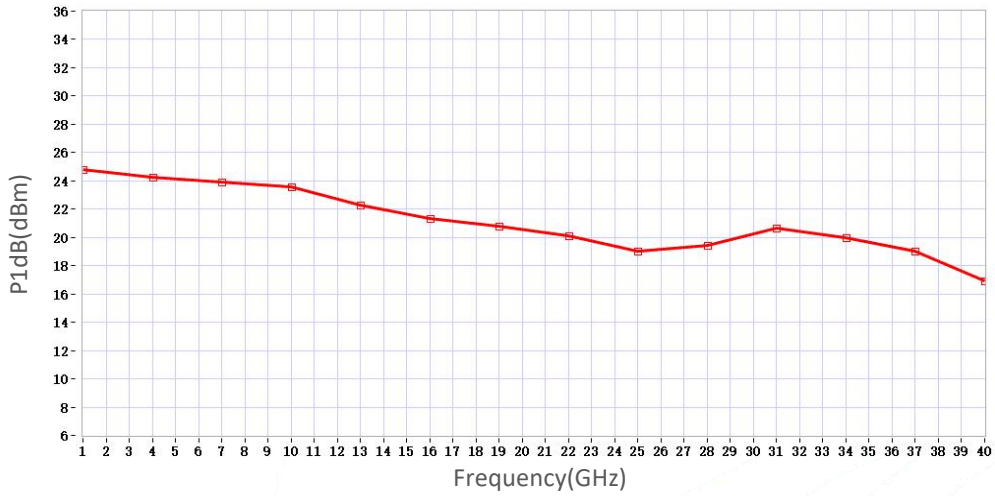


## 典型曲线 Typical Performance Data:

### Gain vs Output Power



### P1dB vs Frequency



### P3dB vs Frequency

